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Monitoring Report

SEA

for the Land and Resource Management Plan

Fiscal Year 1990

SEP 22 1991

Wenatchee National Forest



WENATCHEE NATIONAL FOREST

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F I S C A L Y E A R
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MONITORING REPORT

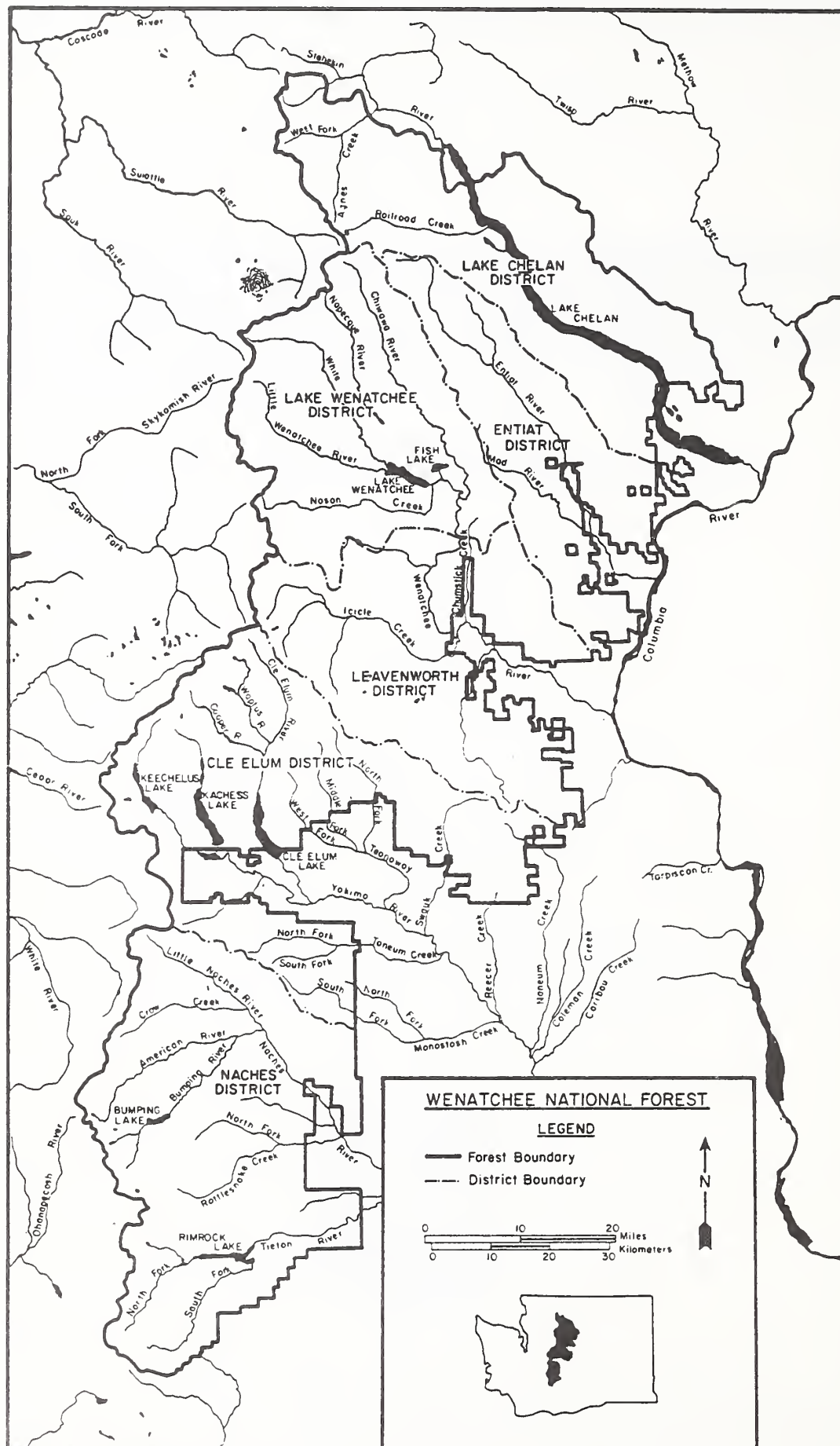
LAND AND RESOURCE MANAGEMENT PLAN

W E N A T C H E E
N A T I O N A L F O R E S T
W A S H I N G T O N



M A Y 1 9 9 1

WENATCHEE NATIONAL FOREST





Date: May 20, 1991

Dear Forest User,

The Wenatchee Forest Plan is one year old. It has established general direction for all resource management activities on the forest. It provides for forest protection and coordinated multiple use management of outdoor recreation, range, timber, watershed, wildlife and fish, minerals, and Wilderness. Its overall purpose is the sustained production of goods and services for the benefit of the American people.

Monitoring is a key part of Forest Plan implementation. This report summarizes and highlights Forest Service monitoring activities for that portion of fiscal year 1990 from April through September. This is our first Forest Plan monitoring and evaluation report, and while it covers only a six-month period, future reports will cover a full year.

As Wenatchee Forest Supervisor, I am responsible for ensuring that all forest management activities comply with the Forest Plan forest-wide standards and guidelines and management area prescriptions. The monitoring and evaluation program tells us how good a job we are doing in implementing the promises made in the plan. It will also tell us whether the various standards and guidelines established by the plan are realistic and achievable. At the same time, it will determine whether the standards are adequate to protect forest resources. If fine tuning is needed, there is a process for Forest Plan amendments, but only after public involvement.

To keep you informed, I will prepare an annual "Report to the Public" which describes progress made in implementing the Forest Plan as reflected by monitoring and evaluation. It will be several years before monitoring gives us a complete picture of Forest Plan results. However, based on our initial observations and my discussion with Forest employees, I believe during the first 6 months of implementation we have accomplished the management promised by the Plan.

If you have questions, concerns, or comments regarding information in this report, a postage-paid response form is enclosed for your convenience. The response form also asks your thoughts about proposed forest plan amendments and possible projects which would help implement the plan. Inside the cover of this document are the addresses of our Ranger Districts and Supervisor's Office. I hope you will continue to be involved with the management of your Wenatchee National Forest.

Sincerely,

A handwritten signature in cursive script that reads "Sonny J. O'Neal".

Sonny J. O'Neal
Forest Supervisor

TABLE OF CONTENTS

I. INTRODUCTION	1
Forest Planning Process	2
II. MONITORING	3
RESOURCE OUTPUTS AND ACTIVITY SUMMARIES (Table)	5
A. RECREATION PROGRAM	7
B. WILD, SCENIC, AND RECREATIONAL RIVERS	8
C. SCENERY MANAGEMENT	9
D. WILDERNESS	10
E. CULTURAL RESOURCES	11
F. COORDINATION OF FOREST PROGRAMS WITH INDIAN TRIBES	12
G. SENSITIVE PLANTS, BIODIVERSITY, AND OLD GROWTH	12
H. WILDLIFE INCLUDING MANAGEMENT INDICATOR SPECIES, HAWK AND OWL NESTS, AND PROPOSED, ENDANGERED AND THREATENED SPECIES	15
I. TIMBER OFFERED, HARVESTED, AND RELATED SILVICULTURAL ACTIVITIES	21
J. SOIL, WATER, FISHERIES AND RELATED WATERSHED MANAGEMENT	24
K. RANGE MANAGEMENT AND RELATED ACTIVITIES	27
L. ROAD MANAGEMENT	28
M. FOREST FIRE PROTECTION AND USE OF PRESCRIBED FIRE	29

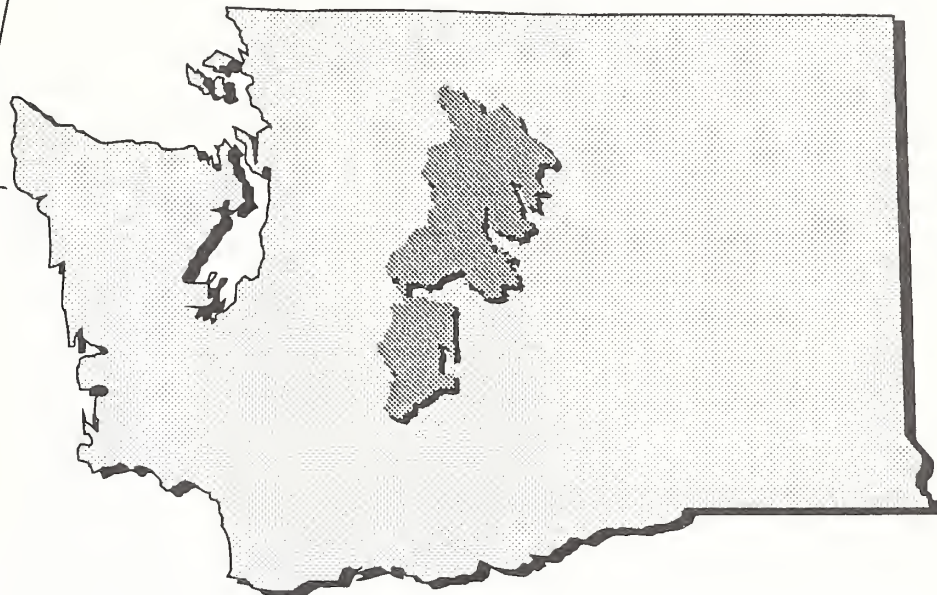
TABLE OF CONTENTS

C O N T I N U E D

N. AIR RESOURCE MANAGEMENT	31
O. COMMUNITY EFFECTS, RESOURCE BUDGETS, COSTS, AND VALUES	32
P. GENERAL MONITORING OF STANDARDS AND GUIDELINES	38
III. FOREST PLANNING UPDATE	41
PLAN APPEALS	41
PLAN IMPLEMENTATION	41
PLAN AMENDMENTS	42
CLOSING COMMENTS	42
RESPONSE FORM	43



WENATCHEE NATIONAL FOREST



W A S H I N G T O N

INTRODUCTION

The Wenatchee National Forest lies on the east side of the Cascade Mountain Range in Central Washington. It extends about 140 miles from north to south, and an average of 35 miles east to west. The Forest has a net area of 2,192,262 acres (larger than Delaware and Rhode Island combined).

Steep, rugged mountains and heavy snowpacks characterize the western portions of the Forest. In contrast, near desert conditions prevail in the eastern grass and shrub covered foothills and valleys. Between the two extremes

are diverse forest and plant communities resulting from the variations in soils, elevation, aspect, temperature, precipitation, and fire influences. The major drainage systems include the Chelan, Entiat, Wenatchee, Upper Yakima, and Naches-Tieton River Systems. All flow eastward toward the Columbia River. Principle Forest resources include timber, forage for wildlife and livestock, recreation, water, and wilderness. Almost two out of every five acres on the Forest are Congressionally-designated wilderness.

Forest Planning Process

The Wenatchee Forest published a Draft Environmental Impact Statement (DEIS) and Proposed Land and Resource Plan in 1986. As a result of public comment on the DEIS, a Supplement to the Draft Statement was released in 1988. The Supplement analyzed a "No Change" alternative in addition to a comprehensive analysis of the Wenatchee Forest's rivers eligible for suitability under the Wild and Scenic Rivers Act. The supplement also covered "management requirements analysis" for protection of water, fish and wildlife.

After the release of the proposed Forest Plan and DEIS more than seventy public meetings were held to give information and receive public input on the Draft planning documents. The Forest received 4,665 responses to the DEIS and Forest Plan, and 2,650 responses to the Supplement to the DEIS released in October of 1988.

Between the Draft and Final EIS, another thirty-three meetings were held for the purpose of issue resolution, and Forest personnel reviewed and responded to all input received on draft documents. The meetings and comments received from the public resulted in numerous changes to the final Environmental Impact Statement and Land and Resource Management Plan.

On March 2, 1990 John F. Butruille, Regional Forester, Pacific Northwest Region, signed The Record of Decision for the Land and Resource Management Plan for the Wenatchee National Forest. There were 10 key provisions in the Record of Decision; one of them required a monitoring plan and evaluation process.

This Report to the Public contains the results of the Fiscal Year 1990 monitoring program.



MONITORING

Monitoring and evaluation of programs and activities on the Wenatchee National Forest is one of the decisions contained in the Record of Decision for the Wenatchee Forest Land and Resource Management Plan, signed by Regional Forester John F. Butruille on March 2, 1990.

The Decision adopting the monitoring and evaluation plans is displayed on pages 18 through 20 in the Record of Decision. The stated objective in the Record Of Decision is:

"to determine whether programs and projects are meeting the Forest Plan direction. Within this broad objective, specific goals are to:

1. Ensure that Forest Plan goals and objectives are being achieved and management prescriptions are being implemented as directed.
2. Determine if the cost of implementing the Plan and the management effects are occurring as predicted."

Information in the Record Of Decision identifies and defines the three levels of monitoring, which are: (1) implementation monitoring; (2) effectiveness monitoring; and (3) validation monitoring. The Wenatchee Forest concentrated on implementation monitoring of the standards and guidelines in environmental analysis, project design and project layout for fiscal year 1990.

The Record Of Decision contains the following direction for implementation monitoring:

"Forest and Ranger District personnel will conduct implementation monitoring as part of their routine assignments and document the results in project files as part of their management responsibilities. Implementation monitoring will determine if the Plan, prescriptions, projects and activities are implemented as designed and in compliance with Forest Plan objectives and standards and guidelines."

The adopted monitoring and evaluation plan is displayed in Chapter V of the Forest Plan. The Forest Plan Monitoring Worksheets in Appendix F of the Plan outline a more detailed monitoring approach for monitoring the various programs. None of the project activities implemented under the Forest Plan have been completed to the point where effectiveness of the standards and guidelines can be determined. This will be accomplished by visiting some of the same areas when project activities are in progress or when they have been completed. These visits will be part of the monitoring program in future fiscal years. A detailed monitoring report is due after five years of monitoring. This fifth year report will discuss the results of effectiveness and validation monitoring, if available.

The Wenatchee Forest Plan was implemented on April 8, 1990. The Wenatchee Forest management team developed and adopted a proposal for Forest Plan Monitoring for the last half of fiscal year 1990 (through September 30, 1990). This proposal specified the monitoring items which would be scheduled for the fiscal year. The monitoring process included reviews of activity files, environmental analysis documents, project plans, and on-site field inspections of various projects. Reviews were made by either individual functional Staff representatives and resource specialists or by review teams which included the Forest Supervisor, Forest Staff representatives, and various resource specialists. The review teams visited at least one project area on each Ranger District and looked at a variety of activities including recreation, fisheries, timber sales and precommercial thinnings. The results of the first year's monitoring of the Wenatchee Plan are contained in this document.

The following table displays fiscal year 1990 outputs as compared to the predicted outputs contained in the Forest Plan.

RESOURCE OUTPUTS AND ACTIVITY SUMMARIES

	UNITS	PLANNED OUTPUTS	FISCAL YEAR 1990 OUTPUTS
<u>Total Recreation Use</u>	M/RVD'S/Yr	5,495.9	5,000 (est.)
<u>Developed Sites Maintained</u>	PAOT/Yr	12,480	12,480
<u>Developed Site Construction and Reconstruction</u>	PAOT for the first decade	721	0
<u>Acres Remaining In Unroaded Areas</u>	M Acres at end of Decade	387.8	556.3
<u>Trail Construction and Reconstruction</u>	Miles/Yr	81.6	11.0
<u>Wild & Scenic Rivers Proposed</u>	Miles Allocated		
Wild		82.5	82.5
Scenic		29.0	29.0
Recreational		118.5	118.5
<u>Cultural Resource Management</u>			
Inventoried Acres	Acres/Year	40,000	79,845
Site Documentation	Sites/Year	50	69
Testing/Data Recovery	Sites/Year	0.5	1
<u>Visual Quality Objectives</u>			
Preservation	M Acres	843.3	843.3
Retention	in	521.8	521.8
Partial Retention	Allocations	332.9	332.9
Modification		147.8	147.8
Max Modification		318.3	318.3
<u>Old Growth</u>	M Acres at end of decade	307.3	316.4
<u>Wildlife Habitat Improvements</u>	Acre Equiv./Yr Structures/Yr	1,900 400	435 19
<u>Range</u>			
Grazing Capacity	M AUM's/Yr	38.7	38.7
Permitted Use	M AUM's/Yr	23.0	22.2
Improved Allotments	% Upward Trend	45	45
Fence Const/Reconst	Miles/Yr	9.0	0.75
Springs Const/Recon	Number/Yr	12	15
Noxious Weed Control	Acres/Yr	375	85
Suitable Lands	M Acres	406.9	406.9

RESOURCE OUTPUTS AND ACTIVITY SUMMARIES

	UNITS	PLANNED OUTPUTS	FISCAL YEAR 1990 OUTPUTS
<u>Timber</u>			
Suitable Lands	<i>Acres</i>	630,514	630,514
<u>Timber Offered</u>			
ASQ	<i>MM BF/Yr</i>	136.0	133.5 ^{1/}
Programmed Quantity	<i>MM BF/Yr</i>	146.0	153.2 ^{1/}
<u>Fuelwood</u>			
	<i>M CF/Yr</i>	3,400	1,400
<u>Reforestation</u>			
Plant	<i>M Acres/Yr</i>	4.3	9.7
<u>Timber Stand Improvement</u>			
	<i>M Acres/Yr</i>	4.2	2.7
<u>Improved Watershed Conditions</u>			
	<i>Treated Acres/Year</i>	180	396
<u>Minerals Leases & Permits</u>			
	<i>Leases - Permits /Year</i>	35	142
<u>Property Line Survey</u>			
	<i>Miles/Yr</i>	70	81.2
<u>Arterial and Collector Roads Const. & Reconst.</u>			
	<i>Miles/Yr</i>	18	8.3
<u>Timber Purchaser Roads Const. & Reconst.</u>			
	<i>Miles/Yr</i>	83	141.4
<u>Fire Management</u>			
Fuel Treatment	<i>Acres/Yr</i>	6,700	8,885
<u>Social/Economic</u>			
Payments to Counties	<i>Million \$</i>	3.3	5.3

^{1/} Output is for part of Fiscal Year. See page 22 for more information.

A. RECREATION PROGRAM

The tremendous diversity of elevation, vegetation, and precipitation on the Wenatchee National Forest results in an equal variety of recreation uses and opportunities. In order to respond to the variety of uses, the Forest provides 244 developed recreation sites which range from observation and information sites to Family campgrounds and winter sports areas. Dispersed recreation opportunities are enjoyed in settings such as Wilderness and non-wilderness, with the non-wilderness areas varying from primitive to rural in their settings. There are 2,463 miles of trails on the Forest, of which approximately 48 percent are located in wilderness.

In fiscal year 1990 the Wenatchee Forest provided approximately 5,000,000 Recreation Visitor Days of use.

Monitoring elements dealing with the recreation program include: 1) Providing a well balanced array of recreation opportunities across the breadth of the Recreation Opportunity Spectrum (ROS) in accordance with public demand and expectations for outdoor recreation, 2) Managing trail use to provide recreation opportunity in a wide range of recreation settings and in harmony with other resource management objectives, 3) Providing safe well-maintained developed recreation facilities for public use commensurate with recreation demand, and 4) Providing opportunities for dispersed recreation activities (summer and winter) where compatible with other resource management objectives.

A summary of the results of the fiscal year 1990 monitoring program include:

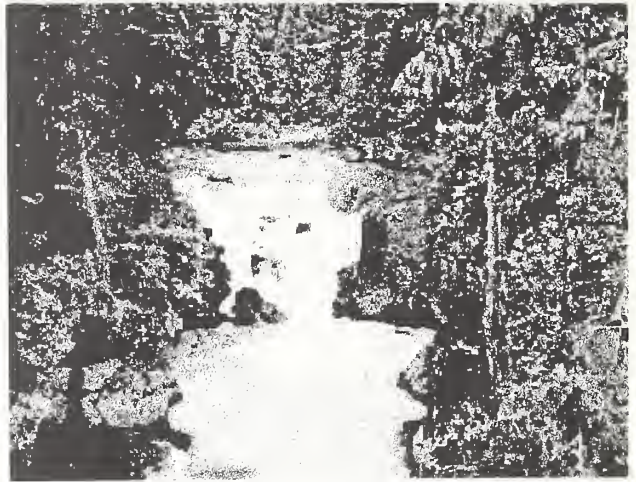
1. In order to insure that the Recreation Opportunity Spectrum (ROS) for the desired future condition of the Forest environment results in the levels expected in the plan, the planned ROS levels and the actual levels achieved by management need to be documented in project Environmental Assessments. This discussion needs to be strengthened in our environmental documents.
2. Eleven miles of new trail were constructed and maintenance activities occurred on more than 70% of the trail system. There were condition surveys conducted on approximately 30% of trails to determine if impairment of other resources was occurring. All Ranger Districts reported that files are maintained on individual trails which contain comments by users. There were 6 letters received this year with correspondence on conflicts among differing uses. Complaints received included ORV/hiker and horse/mountain bike problems.
3. The Forest maintained and administered 244 developed recreation sites, with a total site capacity of 12,480 people at one time (PAOT). Ranger Districts conducted condition surveys on developed sites and collected visitor use data. A detailed report discussing significant findings is due at five year intervals with special attention being placed on use levels in time to predict future recreation construction needs to meet demand.

4. Condition surveys of dispersed sites were conducted on some Ranger Districts. A Recreation Opportunity Spectrum (ROS) map is being updated forest-wide as a benchmark to assure that the desired ROS classes are being met.

A research study was completed by Dr. Roger Clark of the Pacific Northwest Forest and Range Experiment Station in dispersed recreation areas on the Cle Elum and Naches Ranger Districts. Data was collected concerning demand for dispersed recreation and Off Road Vehicle opportunities and the quality of recreation experiences on the Forest. This information will be used in planning Forest management activities and in recreation Planning.

B. WILD, SCENIC, AND RECREATIONAL RIVERS

A total of 33 rivers, river segments, and creeks were examined for eligibility in the National Wild and Scenic River system. Of these 33 rivers, ten were determined to meet the eligibility criteria and are being managed to maintain their free-flowing character and to protect certain outstandingly remarkable values. Segments of the ten rivers were found eligible for one of the three classifications levels, either wild, scenic or recreational. Nine of the ten rivers are recommended for designation. However, the goal of monitoring is to ensure that the character and attributes of all ten rivers are being maintained at their present level until Congress makes a decision on whether they should be designated as part of the Wild and Scenic Rivers System.



Activities were monitored for compliance with standard and guidelines including the need to protect river corridors at their highest potential classification level. Monitoring of activities resulted in project designs compatible with the standards. While reviewing one project, the monitoring team noted that a recently installed fish trapping facility on private land would impede the use of the river by those who float the river on rafts and other small craft. We do not have any authority in the administration of private lands on Forest Service recommended rivers. However, the incident is being retained as a monitoring item as a caution to Forest Service land managers who will be dealing with proposed fish trapping facilities on National Forest Lands.

A major reconstruction of US Highway 410 which crosses the south end of the Forest is nearly completed, with the final segment in the design phase. This section of the highway is adjacent to the American River, which has been recommended for inclusion into the national system as a scenic river under the Wild and Scenic Rivers Act. Ranger District personnel are working with Federal Highway Administration planners to maintain the character of the River's scenic qualities and meet the direction of the Act along this section of highway.

C. SCENERY MANAGEMENT

The Forest is well known for its outstanding mountain, valley, and lakeshore scenery. The landscapes are distinctive in beauty and nature, with sweeping vistas and a variety of topography, ecotypes, and lifeforms. Natural appearing environments exist on much of the Forest with approximately 63 percent of the landscape in a natural appearing condition. Visual quality is to be maintained at a high level for all 36 major scenic highway viewsheds and for all lakes, including the surrounding landscapes.

Forest Landscape Architects were involved in three main efforts this past year. The first was assistance in Plan Implementation where landscape Architects participated as interdisciplinary team members in providing training on a variety of new prescriptions contained in the Forest Plan. The second area includes consultation and development of Recreation Site planning and design of campgrounds and trailheads. Fields Point Landing, Nason Creek Fish Pond, Silver Falls Trail and By Gone Byways Historic Trail are examples of past designs. The third area is Visual Resource Management, where the Landscape Architects participate as consultants or as interdisciplinary team members on numerous proposed timber sales, environmental analysis, and design. Timber sales near heavily visited recreational areas and along major scenic highways such as White Pass, Highway 12, Swauk Pass highway 97, I-90, and Lake Chelan, are examples of projects worked on by Landscape Architects this past fiscal year.

The Landscape Architects also provided consultation and review of design concepts for special projects like the Holden Mine Rehabilitation project at Holden Village. They provided on-the-ground visual management training with other disciplines on the Forest and provided visual management guidelines for proposed micro-wave communication projects, the Highway 410 reconstruction project, and other special use activities on the Naches Ranger District.

The goals of visual resource management monitoring are to manage vegetation and facilities to provide views that are consistent with the stated Visual Quality Objectives (VQO) for each management area.



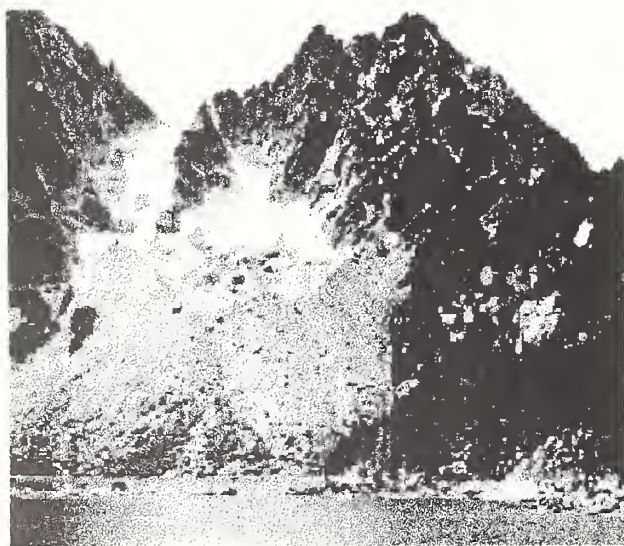
As part of the Forest Plan monitoring, Forest Landscape Architects reviewed two planned projects per Ranger District in order to assess the potential cumulative effect of resource activities on viewsheds. Since this was the first year of Plan implementation, field reviews and evaluations could not yet be done on completed projects. The Environmental Assessment documents (EAs) were reviewed in addition to a field review of the area where the project was to occur. During the monitoring of these projects the degree of visual resource information was found to vary in the EA from very complete to incomplete. The

deficiencies in the information led to the development of a checklist for future projects.

Viewsheds selected for summary analysis in five years will be the Swauk Corridor, White Pass Highway 12, and the Shady Pass viewsheds.

D. WILDERNESS

The Wenatchee Forest shares management responsibility for Lake Chelan-Sawtooth, Glacier Peak, Henry M. Jackson, Alpine Lakes, Norse Peak, William O. Douglas and Goat Rock Wildernesses, which total 1,543,234 acres. Portions of these seven Wildernesses occupy 841,034 acres or 39 percent, of the area on the Wenatchee Forest and span a multitude of environments and elevations. They were designated by Congress with the Wilderness Act of 1964, the Alpine Lakes Area Management Act of 1976, and the Washington State Wilderness Act of 1984.



The goals of monitoring resource conditions in the Wilderness are to perpetuate wilderness character, natural ecological processes, and to provide recreation opportunities appropriate in wilderness. The intent is to insure that visitor use and management activities are not degrading wilderness character and that natural ecological processes are not significantly altered by the influences of humans.

Specific monitoring activities are conducted to assure that recreation user impacts do not exceed Forest Plan standards and guidelines as expressed by the Limits of Acceptable Change (LAC). Monitoring air quality and the condition of air quality related values in Class I areas is just beginning (see pages 31 and 32 under Air Management).

In the Wildernesses established prior to the 1984 Washington Wilderness Act, considerable initial site inventories have been completed. Additional sites were inventoried in 1990. Repeat monitoring of resource conditions three to five years after the initial inventory was completed for many sites this past year. In the Glacier Peak and Alpine Lakes Wildernesses more than 70% of the human campsites have received initial inventory and a large percentage of these have received at least one subsequent visit.

A monitoring report was prepared for the Alpine Lakes Wilderness in 1990. This report describes the results of monitoring completed since 1982. Results of the monitoring indicate overuse in many areas with local site damage beyond the limits of acceptable change. As a result of this analysis, a major effort has been undertaken to repair resource damage documented in the report.

Monitoring efforts in the Wildernesses added to the system in the Washington State 1984 Wilderness Act are well underway. The majority of the effort is still going into the accomplishment of the initial inventory of site conditions. Some subsequent monitoring has been done in high use areas where resource values are sensitive. Many of the popular destination areas received high levels of use prior to wilderness designation, and standards were being exceeded at the time wilderness plans were implemented. In many of these areas ten to twelve years of monitoring will be required to determine if resource conditions are improving or deteriorating further following wilderness designation.

E. CULTURAL AND HISTORIC RESOURCES

The cultural resource base of the Wenatchee Forest includes a diverse and unusually rich range of historic and prehistoric artifacts and sites. Many of these properties are unique. They provide the sole record of former habitats, ways of life and past human activities. They help provide an understanding of human adaptations, uses, and alterations of the Cascade Mountain environment.

A variety of activities undertaken this past year have implications for Cultural Resource management. These include all proposed ground disturbing projects such as timber sales, trail, and road construction. A proposed land exchange required cultural resource surveys to determine if any cultural sites exist within the project areas. The text for an interpretive

brochure and the environmental analysis were completed for the Bygone Byways Interpretive Trail within the Stevens Pass Historic District. The Yakima Indians provided comments and suggestions on future management of a rock shelter site which has been repeatedly looted. An archeological site required extensive shovel-testing to determine its boundaries within a proposed campground development. The exact route of the historic Naches Trail was also surveyed and documented.



Forest Plan monitoring goals are: 1) to the extent practical, to protect cultural and historical resources from vandalism, disturbance from project activities, and natural degradation, and 2) to rehabilitate damaged sites listed in, or eligible for inclusion in, the National Register of Historic Places.

High risk sites (significant cultural sites susceptible to losses or degradation) were monitored on affected Districts. A total of 37 sites were visited and reviewed to determine if project or use-related impacts were occurring. A special monitoring study was undertaken in the Little Naches drainage to determine the extent of damage which may be occurring to cultural sites from ORV use. Of the 26 sites inspected, 54% are receiving moderate to high levels of impact from ORV use. This includes both surface and subsurface disturbance. A plan to better manage ORV use in the drainage is being undertaken in fiscal year 1991. Some unauthorized digging was observed at one site on the Leavenworth District but no disturbance of artifacts was detected.

There were 79,845 acres of cultural resource surveys conducted for project activities during the year and these resulted in 69 new sites being recorded (52 prehistoric and 17 historic sites). This is almost a 20% increase over last year in the number of sites discovered, although the acres surveyed has actually decreased by 34%.

Emergency stabilization was completed for a CCC-era community kitchen within the Salmon La Sac Campground. This structure is eligible for listing in the National Register. The Chelan Ranger Station CCC-era main office was also rehabilitated and expanded this past year to continue its useful life as an office structure.

F. COORDINATION OF FOREST PROGRAMS WITH INDIAN TRIBES

The Forest is within the area ceded to the U.S. Government by the Yakima Indian Treaty, dated June 9, 1855. With the conclusion of the Yakima Indian Treaty and the subsequent Executive Order of July 2, 1872, most of the original Native American inhabitants of what are now Chelan, Kittitas and Yakima Counties were resettled into the Yakima and Colville Reservations. However, certain rights and privileges to the ceded lands were retained. This requires Forest managers to maintain a special relationship with the Yakima and Colville Tribes.

The goal of Forest Plan monitoring is to Coordinate with the appropriate Tribal representatives for all projects which may concern them.

In addition to the monitoring included below a summary of coordination with the Yakima Indian Nation on Fisheries Habitat management is included on pages 25 through pages 26 of this report.

All Ranger Districts solicited Tribal concerns during the scoping of public and agency concerns while planning projects on their units. Draft analysis information has been made available for review for projects of interest to the Indian Tribes, as well as for any project that was felt may affect the interest of the Tribes. The Naches Ranger arranged a Forest-Wide meeting with Yakima Indian Nation representatives to facilitate understanding of concerns and develop additional communication links. Naches fisheries and timber personnel also arranged a meeting with Yakima Indian Nation Environmental Affairs Personnel to let them know how best to transmit concerns about the Forest Service environmental analysis process.

G. SENSITIVE PLANTS, BIODIVERSITY, AND OLD GROWTH

1. Sensitive Plants.

The Forest is home to a large variety of unique plant species. These species represent habitats and plant communities which have developed as a result of various geologic processes. There

are 50 plant species on the Forest that are on the Region 6 sensitive plant list. Of those 7 are candidates for Federal listing and the remaining 43 are listed by the State of Washington.

This past year, inventories were conducted to determine populations and distribution of threatened, endangered, and sensitive species. Over 15,000 acres were surveyed and at least 56 biological evaluations were completed before ground disturbing activities occurred. In several locations sensitive plants were found and proposed actions were modified to avoid impacts.

The goal for management of sensitive plants is to provide appropriate habitat to maintain viable populations or enhance populations of all threatened, endangered and sensitive plant species.

During the fiscal year a preliminary monitoring plan for Wenatchee Larkspur was developed and two populations were sampled to determine numbers and heights of plants. Other monitoring activities were also conducted on Wenatchee Larkspur by the Pacific Northwest Research (PNW) Station in cooperation with the Wenatchee Forest. Further, trend sampling on Chelan rockmat was also initiated as a cooperative venture between the Forestry Sciences Lab (PNW Station) and the Wenatchee Forest.

2. Biodiversity

Ecosystem or biological diversity is a complex issue that relates to many attributes of the forest. Biological diversity is difficult to quantify on a National Forest of over 2 million acres. Some of the topics related to diversity include old growth, sensitive species, and forest fragmentation. More information is needed on how to define and measure diversity, including a model to provide a quantitative diversity index.

A number of workshops have been held to discuss biological diversity in the Forest Service's Northwest Region and the Wenatchee National Forest. Topics of discussion from numerous authorities included: forest fragmentation, monitoring, corridors, new perspectives, and definitions of biological diversity. Further, biodiversity was addressed in a number of environmental analyses in keeping with Forest Plan direction. Efforts are currently underway to determine the best ways to address biodiversity on the Wenatchee National Forest.

The goal for managing biodiversity is to maintain native and desirable introduced or historic plant and animal species and communities. Monitoring questions include: (1) Is the trend of biological diversity moving as estimated?, and (2) Is the model for biological diversity being used on project and sub-drainage evaluations? To answer these questions requires Regional direction, involvement of the PNW Research Station and an operational Geographic Information System. No monitoring of biological diversity was accomplished in Fiscal Year 1990.

3. Old Growth Ecosystems

Old growth is typically thought of as a plant community made up of very large trees and other related vegetation that has no visible evidence of human activities and may be several hundred years old. There are areas of old growth like this on the Wenatchee National Forest. However, characteristics of old growth vary with a site's growing potential and much of the forest land on the Wenatchee Forest probably has never supported the awe-inspiring stands commonly equated with old growth. Forest employees have completed several old growth surveys. The estimates indicate that there are 319,000 acres of old growth on the Wenatchee National Forest of which 148,000 acres are in Wilderness. About 70,000 acres are outside of Wilderness but not available for timber production as a result of Forest Plan allocations, and 101,000 acres are shown as available and suitable for timber production in The Plan.

In fiscal year 1990, regional definitions were developed for old growth in several climax tree types. More definitions will be completed in the coming year. Further, an inventory of old growth was completed west of the Cascades on National Forest System lands. An old growth inventory will be completed on the east side of Washington and Oregon in the near future.

The Federal Register announced a decision by the Department of Agriculture to vacate the December 1988 Record of Decision by the Chief of the Forest Service, which amended the Regional Guide for management of the Northern spotted owl in the Pacific Northwest Region. The same Federal Register announcement directed that: "the Forest Service will

conduct timber management activities in a manner not inconsistent with the Interagency Scientific Committee recommendations during this interim period." This decision should reduce the old growth acres available for timber production on the Forest.



The goal of the forest management program is to assure the maintenance of old growth forest ecosystems as needed for the plant habitat, esthetics, and biological diversity, while still providing appropriate levels of timber for commodity use.

There were 2,387 acres of old growth offered in timber sales in fiscal year 1990 as part of section 318 of the 1990 Appropriations Act, which would reduce the Forest estimated old growth to 316,413 or by 0.7%. This reduction is 2.4% of the acres available for timber harvest. If old growth is harvested throughout the decade at the rate it was sold this fiscal year, we will be harvesting old growth at twice the rate estimated in the Forest Plan Model. The acres represent volume sold, but not

necessarily harvested, for a one year period. The harvest amount will be checked annually and evaluated at the end of five years as outlined in the monitoring plan.

H. WILDLIFE INCLUDING MANAGEMENT INDICATOR SPECIES

HAWK AND OWL NEST SITES, AND PROPOSED, ENDANGERED AND THREATENED SPECIES

The Wenatchee National Forest provides year-round or seasonal habitat for an estimated 394 species of wildlife, which includes 13 amphibians, 18 reptiles, 273 birds and 90 mammals.



The wide variety and number of wildlife species is due to the diversity of habitat found on the Forest: from high elevation habitat suitable for mountain goats, to low elevation habitat suitable for jack rabbits. There is wet westside type habitat used by spotted owls and dry eastside habitat inhabited by mule deer. The extremes of habitat often occur close together with the result being a large patchwork of vegetation types. Fire and vegetation manipulation play a role in providing a range of successional stages in a diversity of habitats.

1. Management Indicator Species

Management Indicator Species (MIS) are plant or animal species whose population characteristics can be used to evaluate the effects of land and resource management practices on the habitats they use. Selected species are:

WILDLIFE MANAGEMENT INDICATOR SPECIES AND HABITATS SELECTED FOR THE WENATCHEE NATIONAL FOREST

SPECIES	HABITAT
Northern Spotted Owl Pileated Woodpecker Marten/Northern Three- Toed Woodpecker	Mature or Old Growth Coniferous Habitat
Mountain Goat	Rockland, Alpine High Elevation Old Growth Conifer Habitat
Mule Deer and Rocky Mountain Elk	Shrub, Grass, Meadow, Thermal and Hiding Cover
Primary Cavity Excavators	Standing and Down, Dead and Defective Trees
Beaver/Ruffed Grouse	Riparian/Deciduous Habitat

The goal of the indicator species program is to provide habitat to maintain viable populations of all vertebrate species on the Forest.

The Forest Plan estimates completion of an average of 1900 acres and 400 structures per year of habitat improvements for wildlife and plants. In 1990 the Forest completed 435 acres and 19 structures in wildlife with KV funds

from timber sales. The planning has been completed to increase this acreage in the 1991 program to more than 1000 acres and 200 structures.

Direction for management of spotted owls and their habitat has changed since decisions were made in the Forest Plan. The new direction from the Federal Register is: "the Forest Service will conduct timber management activities in a manner not inconsistent with the Interagency Scientific Committee recommendations during this interim period." This decision establishes habitat conservation areas to be managed for spotted owl habitat.

In fiscal year 1990 there were an estimated 6,000 acres of suitable spotted owl habitat harvested from sold timber sales. This is about twice the estimated amount planned for harvest per year. When adding this amount to the habitat harvested by timber sales in 1989, the amount harvested is a little above twice the amount planned in the Forest plan. Spotted owl habitat has been reduced about 2.5% in the last two years. A large part of the spotted owl habitat being harvested is from timber sales sold before implementation of the Forest plan. Even though the amount this year is twice what was predicted, the amount harvested in the next few years is likely be well below levels predicted in the Forest Plan because of new requirements for protection of spotted owl habitat.

Just prior to completion of the Forest Plan, inventories had located 55 pairs and 72 single spotted owls on the Forest. Monitoring during 1990 identified additional birds and the Forest is now known to have 116 pairs and 87 single bird sites plus another 19 sites with spotted owl pairs on other ownerships adjacent to the Forest.

In previous years, the highest elevation nest location found was close to 5000 feet. During 1990 an owl pair was found nesting at 5,200 feet. This new information indicates that there may be more spotted owl habitat on the Forest than previously thought.

Some of the 50 owls banded the previous year were relocated in 1990. The number of owls which relocated to new sites was smaller than expected but there was insufficient information to conclude that owl movement activities are different here than similar studies have shown in other locations. To add data to the first years banding information, nearly 200 owls were banded in 1990. This should provide additional information for managing spotted owls in the future.

One research study on the Forest concluded that habitat used in spring, summer, and fall by spotted owls includes less total area that is used by owls in other geographic provinces. The acres of habitat used in winter is larger than in other geographic provinces.

Another research study measured the specific characteristics of areas known to be used by spotted owls. Logging had occurred in the past at some of the sites where information was collected and some sites had no past logging. This project will collect additional information in the coming year.

Habitats for pileated woodpeckers, marten and northern three-toed woodpeckers are closely tied to the habitat for northern spotted owls. The Interagency Scientific Committee recommendations for spotted owl habitat management will also have an effect on these species' habitats and populations.

SIGHTINGS MADE ON THE FOREST
IN 1990

Species	Number Sighted	Number in Dedicated Habitat
Pileated woodpeckers	125	10
Martin	14	3
Northern three-toed woodpeckers	9	0

A number of pileated woodpecker and marten sites dedicated by Forest Plan for special management were reviewed during project planning and boundaries were finalized to meet the standards and guidelines in the Mature Habitat prescription. The monitoring planned for these species was not completed because of funding limitations.

Some timber sale projects were inventoried for marten to determine the presence or absence of this species during the year. Marten were found at some sites. An additional number of projects are planned to collect information on marten during the timber sale preparation phase in FY 1991.

Most project planning considered big game species in a general way. After some testing, plans have been prepared to complete models during 1991 that measure the effects of projects on these species. Few projects impacted mountain goat habitat in 1990.



Most project plans considered protection of standing dead trees as primary cavity excavator habitat. Plans were formulated to prepare models for monitoring use in 1991.

Woodcutting was allowed throughout most of the Forest. Refinement of woodcutting permit requirements may be necessary to implement standards and guidelines in the Forest Plan.

Monitoring of riparian habitat has been incorporated into the monitoring for fish and water.

2. Proposed, endangered and threatened species.

a. Sensitive species.

Species proposed for listing as threatened or endangered are identified as "sensitive" species within the Forest Plan. Sensitive species include bighorn sheep, Townsend's big eared bat, Canadian lynx, California wolverine, ferruginous hawk, Swainson's hawk, and long-billed curlew. Forest managers should add the common loon to our sensitive species list and remove the Swainson's hawk to be consistent with the Regional Foresters List of sensitive species. This report reflects these changes.

The goal for the management of sensitive species is to enhance habitat to prevent the need for listing species on the Regional Forester's sensitive species list.

Few projects affected bighorn sheep populations or habitat. Bighorn sheep populations and their use areas have still not been determined. Therefore conflicts with standards and guidelines may exist as a result of domestic sheep grazing.

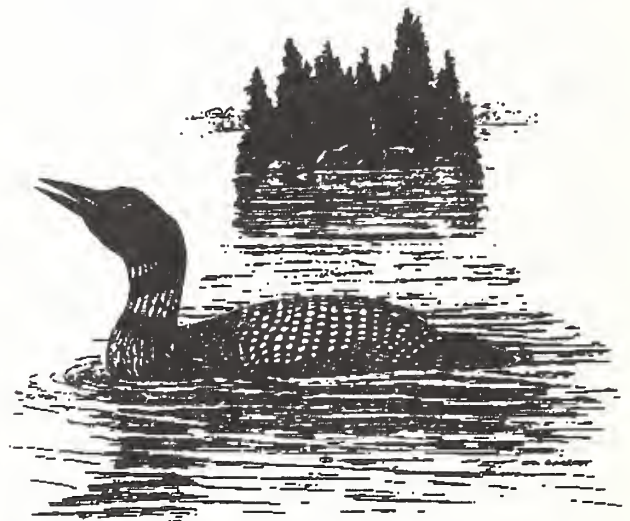
A recreation trail project has been developed in and around the primary winter cave habitat of the only population of Townsend's big eared bat on the Forest. The bat numbers have been monitored several times during the year. The project in the area has been modified to maintain the bat population and some structural habitat improvements are being planned that may increase the population.

Habitat for Canadian lynx and California wolverine was evaluated for all timber sales. Some projects improved habitat and some decreased habitat. The net effect is not known at this time.

Ferruginous hawk populations and habitat were assessed for all timber sales. Habitat and populations appear unchanged.

The Forest has not located any habitat or populations of long-billed curlew. No projects have affected habitat or populations of this species.

Common loons have been located on the Forest at Leech Lake, Fish Lake, Lake Wenatchee, Rimrock Lake, and Lake Chelan. Additional inventory of lakes is needed to determine population numbers and reproduction.



b. Endangered and Threatened Species.

Endangered and threatened wildlife species found on the Forest are the bald eagle, peregrine falcon, grizzly bear, gray wolf, and northern spotted owl. All reports of sightings for threatened and endangered species were documented and in the case of spotted owls, grizzly bears, gray wolves, and peregrine falcons were checked to determine the accuracy of the report. As planned, all sightings were reported to the Washington Department of Wildlife in a timely manner.

The goal for endangered and threatened species is to manage critical wildlife habitat to improve the status of threatened and endangered species to a point where they no longer need protection under the Endangered Species Act of 1973.

Most projects were assessed for their impacts to threatened and endangered species and biological evaluations prepared. Where there was an effect on these species or habitat the project was reviewed with the U.S. Fish and Wildlife Service. Only in the case of spotted owls were there any effects that would be considered "taking" (to take is to harass, harm, pursue, hunt, shoot, wound, trap or collect, or to attempt to engage in any such conduct). In some cases, a management activity like a timber sale may be considered a "taking" because of impacts on habitat used by a species like the spotted owl. A permit to allow "take" was issued, by the U.S. Fish and Wildlife Service when habitat losses were not deemed critical to the survival of the owl.

The goal for bald eagle habitat is to meet recovery levels established in the Pacific States Bald Eagle Recovery Plan. Nest sites at Rimrock Lake and Lake Wenatchee produced one eaglet each this year. Eagles are suspected to be nesting on Lake Chelan but a nest could not be located. Nesting platforms have been built on Lake Chelan and Lake Wenatchee. No activity was observed at the Lake Chelan site but there was some activity observed at the platform at Lake Wenatchee. Some projects reduced bald eagle habitat. The habitat reduced was not necessary to meet the recovery objectives for bald eagles.

One peregrine falcon sighting was confirmed on the Forest. The Naches Ranger District was part of a cooperative effort that hacked four young peregrine falcons (Hacking is raising young birds for release into the wild). Some projects increased habitat and some reduced habitat. It is not known what the overall effect for the Forest is, but the areas identified for recovery were maintained as directed in the Pacific Coast Recovery Plan for American Peregrine Falcon.

The Interagency Grizzly Bear Committee produces a yearly report showing reported sightings made in Washington. This report indicates that the total number of sightings is increasing in the last few years. This may or may not mean that the total population of bears is increasing. The Forest Service is participating in an interagency effort (U. S. Forest Service, U. S. Fish and Wildlife Service, North Cascades National Park, Washington State Department of Wildlife) for mapping grizzly bear habitat for the North Cascades Grizzly Bear Evaluation area to see if recovery is possible. This project should be concluded in the next couple of years. In 1990, projects affected

grizzly bear habitat both positively and negatively. It appears that the effects on habitat and populations over the whole Forest did not change.

There were 11 unconfirmed and 3 confirmed sightings of gray wolf on the Forest this past year. One of the confirmed wolf sightings was of an adult and two young on the Lake Wenatchee Ranger District. There was an unconfirmed report of a pack of wolves sighted on the Naches Ranger District. The number of confirmed sightings indicates the wolf population is on the increase. Plans have been prepared for biologists to "HOWL" for wolves to begin determining denning areas and possible population numbers in the coming year. The Forest produced a map of areas where, if managed for wolves, little if any changes in management for other resources would be needed. This map identified that a large part of the Forest could be managed for wolves with little conflict with other uses. In 1990 some projects reduced habitat for wolves and some increased habitat. The overall effect is not known, but it is thought that no action has been taken that would prevent recovery of wolves.



The status of the northern spotted owl has been discussed previously in this report under the indicator species section.

3. Hawk and Owl Nest Sites.

To meet the Migratory Species Treaty Act the Forest is required to protect nest sites of hawks and owls. The Forest has not made allocation of land for these sites but will inventory and maintain roost and nest sites.

The program goal for hawk and owl nest sites is to manage wildlife habitat to provide for recreation opportunities for viewing wildlife.

NESTS PROTECTED IN 1990

Species	Number of Nests
spotted owls	many
bald eagles	2
red tailed hawk	1
goshawk	4
barred owl	2
great horned owl	3
unidentified hawk species nests	4
unidentified owl species nests	4
unidentified hawk or owl species nests	16

This is an increase in the number of nests being protected from previous years.

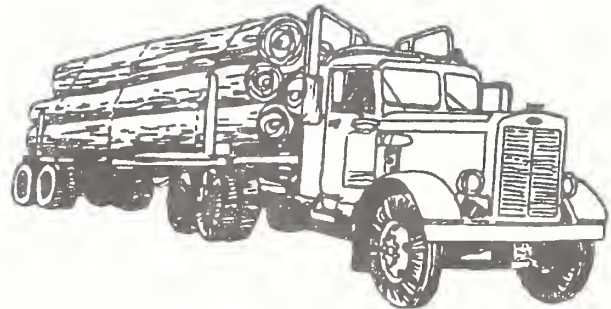
I. TIMBER OFFERED, HARVESTED, AND RELATED SILVICULTURAL ACTIVITIES

Conifer forest ecotypes occupy approximately 69 percent of the Forest. Elevation, soil types, precipitation, and aspect combine to create a wide variety of ecological vegetative types. The Dry Forest includes the low elevation, dry sagebrush, bitterbrush, grass type along the east edge of the Forest changing to the Ponderosa pine/Douglas-fir zone with increasing elevation and moisture. The Wet Forest is characterized by a wide variety of plant species. Ponderosa pine may be present, but without disturbance it will gradually be replaced by shade tolerant grand fir, silver fir western hemlock, or western red cedar. The Sub-Alpine Parkland is best known for its wide variety of flowering herbs and forbs, parklike stands of whitebark pine, Engelmann spruce, subalpine fir, and alpine larch.

Of the 2,192,262 acres of net National Forest land on the Wenatchee Forest, 791,899 acres outside of wilderness were determined to be tentatively suitable for timber production. After deducting tentatively suitable acres located in other land allocations where there is no scheduled timber harvest, approximately 630,514 acres of suitable lands are available for harvest activities. This represents about 30 percent of the National Forest. The adoption of the Interagency Scientific Report requiring Habitat Conservation Areas for the Northern Spotted Owl, will undoubtedly result in a further reduction in available timber lands. In both the dry and wet zones, the most common conifer species is Douglas-fir. However, old

growth Ponderosa pine receives the most interest from local sawmills. Douglas-fir and Ponderosa pine make up 50 percent of the existing volume of timber on the Wenatchee.

Approximately 172.9 million board feet of timber was harvested on 14,380 acres of the Wenatchee Forest this past year. Revenue from timber sales was \$18,824,432 of which \$4,175,193 was returned to the local Counties for roads and schools. There were an estimated 1,600 jobs generated from timber activities.



Monitoring goals for the Forest's timber and related silvicultural activities include: (1) achieve planned timber sale volumes annually for the planning period; (2) manage National Forest timber harvest to meet direction on size of created openings; (3) ensure that regeneration harvests are not prescribed for areas where average annual growth has not generally reached culmination of mean annual increment; (4) assure that silvicultural prescriptions are appropriate, effective and consistent with resource objectives for each management area, (5) minimize the amount of time between the removal of existing trees and reforestation with desired species; (6) verify that technology and/or other information has not been developed to justify reclassifying lands from a not suitable status to suitable, or vice versa; and (7) assure that management practices do not

contribute to increases in the incidence of destructive insects and diseases such as spruce budworm, Douglas-fir tussock moth, pine beetle, mistletoe, root rots, and others.

One of the effects on timber offered on the Forest in fiscal year 1990 was section 318 of the 1990 Federal Appropriations Act. Section 318 required that a specific volume of timber be sold for both fiscal year 1989 and 1990 in the Forest Service's Pacific Northwest Region. The Wenatchee Forest share was 306.37 million board feet.

The Forest attained this target. The timber volume offered after the March 1990 Forest Plan implementation was:

	GROSS ^{1/}	NET ^{2/}
	(million board Feet)	
Sell, April - June 1990	47.04	35.64
Sell, July - September 1990	119.49	107.65
Offered but not awarded	11.70	9.70
TOTAL in MBF	154.83	133.59

^{1/} Includes pulpwood and firewood.

^{2/} Includes green sawlogs only.

In addition to this volume there was 15.1 million board feet offered in fiscal year 1990 before the Forest Plan was implemented. Volume sold in 1989 and additional carry-over volume sold in 1990 from the 1989 program accomplished the Section 318 attainment volume directed by the 1990 Appropriation Act.

All timber harvest activities on National Forest land met the direction on size of created openings.

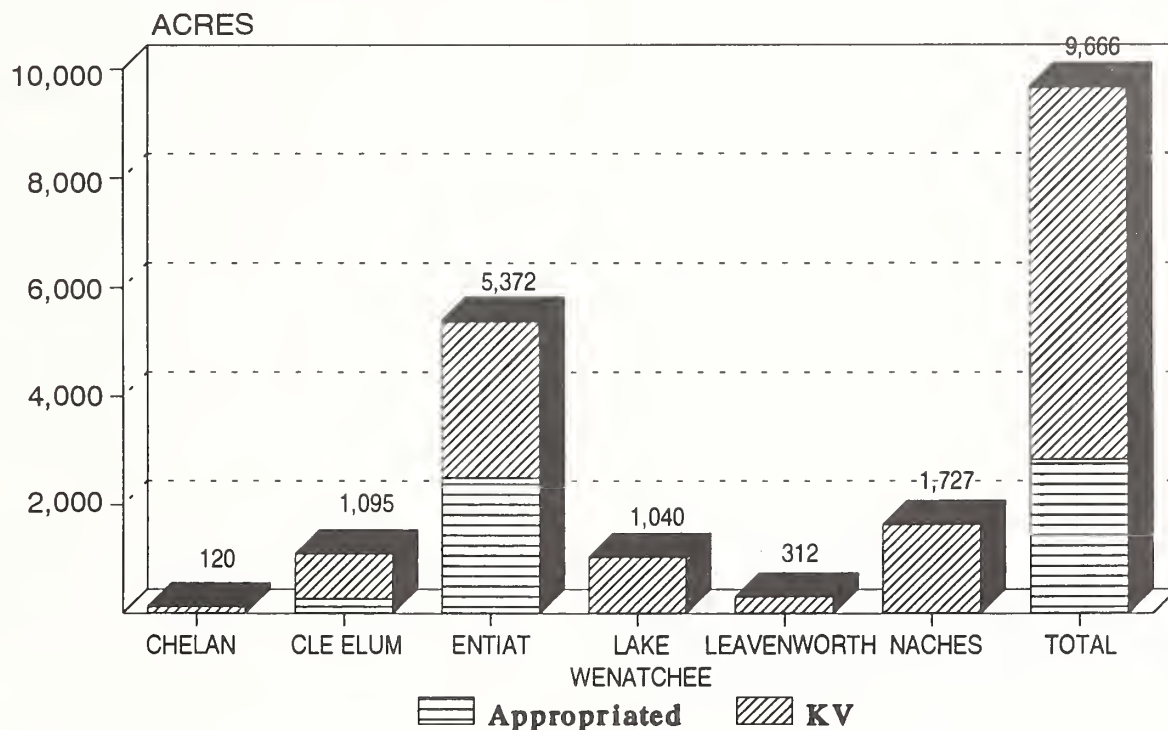
Timber sales monitored in 1990 for silvicultural practices included some in the preparation stage, some in the sold but not cut stage, and some in the reforestation stage. In general, all stands scheduled for regeneration harvest were at or beyond culmination of mean annual increment. In a few cases, small areas that had not reached culmination were included in regeneration harvest cuts.

Monitoring for growth and yield is difficult on recent sales. However, some estimated comparisons with expected yield were made on sales monitored. Estimated results are that of 18 areas monitored, 7 are estimated to result in less yield and future growth than expected, 3 are higher than modeled, and 8 should produce as expected.

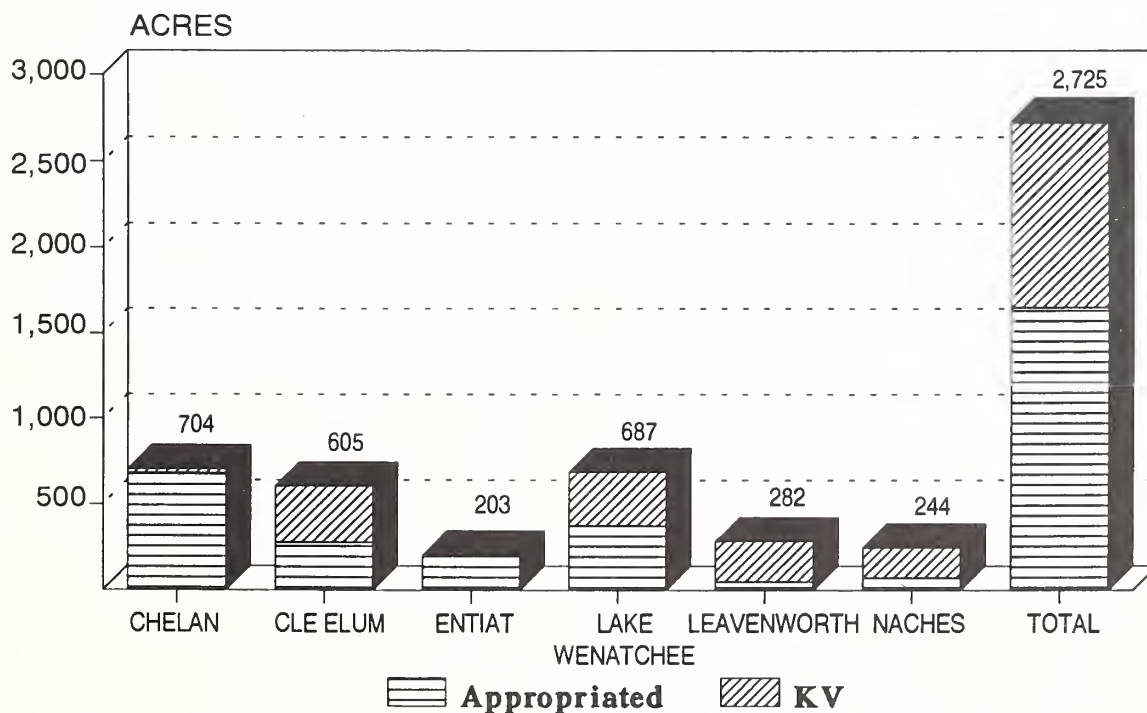
In fiscal year 1990, an estimated 2 million tree seedlings were planted to reforest 9,665 acres. This is about double the predicted reforestation amount. The difference is primarily due to reforestation efforts on the Dinkelman burn. In addition, 2,725 acres of timber stand improvement (TSI) work were accomplished (see page 23).

The average elapsed time from harvest to reforestation is not available because The Plan was implemented in 1990 and the three year time period has not elapsed. However, past experience indicates that reforestation will occur well within the three year time period. The first year plantation survival from 1989 reforestation was approximately 90%.

REFORESTATION ACCOMPLISHMENTS WENATCHEE NATIONAL FOREST FY 90



TIMBER STAND IMPROVEMENT ACCOMPLISHMENTS WENATCHEE NATIONAL FOREST FY 1990



Suitability of forested land to sustain commercial crops of industrial wood is being field verified within new timber sale planning areas. The primary consideration is the ability of a site to be reforested within five years. Ranger Districts will update suitable acre inventories on Geographic Information System as the program becomes operational.

The annual Aerial Insect Survey Maps were reviewed and sent to the Districts. A general increase in insect caused tree mortality was indicated, especially in grand fir stands.

J. SOIL, WATER, FISHERIES AND RELATED WATERSHED MANAGEMENT

Soil and water are two of the basic resources on the Wenatchee Forest. Due to the relationship of both soil loss and water quality to management activities it is difficult to separate them when discussing soil or water monitoring and effects of project activities on these resources. In addition, fish habitat and fisheries management is directly dependent on the condition of the basic soil and water resources.

One of the more important roles of forest soils is their ability to absorb and store water, then release it slowly over time. The slow release of this stored water is especially important for late summer stream flows. It can affect fish habitat, as well as the availability of water for irrigation and other uses.

1. Soil

The Wenatchee National Forest is a large forest and has within its boundary more than 200 different kinds of soils. There are several reasons that the Forest has so many different kinds of soils. It has a wide range of parent materials (more than 30 different geologic formations), wide ranges in elevations (800 to 9,500 feet), and precipitation (9 to 120 inches), dramatic topographic variations, several different sets of soil transported by ice, water, or wind, and a great variation in time during which soil formations have been occurring.

The goal of soil monitoring is to assure the Forest is implementing management practices which maintain or enhance the productive properties of the soil resource.

Approximately 290 acres were monitored in timber harvest and slash disposal areas on the Lake Wenatchee, Leavenworth and Entiat Ranger Districts.

A general soils inventory has been completed for the entire forest. In addition a more intensive survey has been completed for the Cashmere Valley area. Another has been started for the Naches Ranger District and will be completed in four years. This type of resource inventory will be the basis of better resource management decisions and result in fewer impacts on watersheds.

2. Water

The Wenatchee National forest is an extremely important source of high quality water for all uses. The water produced on the Forest maintains components of the natural ecosystem, including vegetation, fish, and wildlife. Water also serves the administrative needs of the Forest Service and is used both on and off Forest for domestic, municipal and industrial purposes, stock watering, irrigation, power generation, and recreation. There are an estimated 3,600 miles of perennial streams on the Forest, with 806 miles of Class I streams and 963 miles of Class II streams. The Forest contains hundreds of lakes, ponds, and springs that receive a variety of uses. There are an estimated 57,000 acres of lakes and reservoirs on the Forest.

The Forest Plan water monitoring goal is to maintain watershed condition to ensure meeting or exceeding water quality standards established by the State of Washington.

Water temperature monitoring was accomplished in 1990 through the establishment of 10 thermograph stations. Six thermograph monitoring stations were in operation on the Naches Ranger District and two on the Cle Elum Ranger District. In addition maximum/minimum thermometers were placed on approximately 70 streams across the Forest. The purpose of this monitoring is to identify potential fish habitat by measuring critical maximum daily temperatures, and to identify any changes in temperature ranges caused by land management activities.

Streambed core sampling was accomplished on 10 core sampling sites in coordination with the Yakima Indian Nation. Core sampling was completed at seven sites on the Little Naches drainage and in cooperation with the Washington Department of Fisheries, the Washington Department of Wildlife, and the Yakima Indian Nation at 18 sites on the Cle Elum Ranger.

Baseline macroinvertebrate information was collected on three streams on the Cle Elum Ranger District.

The Little Naches channel transects were discontinued in 1987 by mutual agreement between the Forest Service and Larry Wasserman, fisheries biologist for the Yakima Indian Nation.

High Lakes surveys focusing on recreation use, riparian habitat, and fish growth were completed in cooperation with the Washington Department of Wildlife on the Chelan Ranger District.

In addition, monitoring is being conducted to determine the effectiveness of stream habitat improvement work in the Holden Mine Rehabilitation Project. Effectiveness monitoring also was conducted for the Mission Creek Project on the Leavenworth Ranger District.

In order to monitor the cumulative effects of forest management activities on watershed condition and fish habitat, the Forest is in the process of developing an appropriate cumulative effects process to monitor subdrainages. Jenette Smith, a graduate student at the

University of Washington, Center for Stream-side Studies with assistance from the Forest is conducting her master's research testing a cumulative effects methodology on the Forest.

3. Fish habitat and management indicator species.

Fish and the aquatic resources on the Wenatchee National Forest are major recreational and aesthetic assets. Commercial and sport fisheries depend upon the Forest ecosystem for spawning and rearing habitat, as well as a quality source of fresh water for downstream fisheries. The Forest has about 241 lakes and reservoirs and 1,769 miles of streams and rivers that support fish. Approximately 806 miles of streams and one large lake are available to anadromous fish. Resident trout are the basis of the majority of the recreational fishing on the Forest. The continuation of this use is a major concern. There are 11 species of cold water resident fish and three species of warm water resident fish found on the Forest. There are four species of anadromous fish, including steelhead trout and chinook, sockeye, and coho salmon that utilize the Forest for spawning and rearing.

A total of 53 anadromous fish habitat structures and 25 inland fish habitat structures have been built. A detailed riparian inventory has been completed on about 200 miles of stream channel each year for the past two years.

The Forest goals for fisheries management are to provide riparian habitat as specified in the Forest-wide Standards and Guidelines to meet water quality, fish and wildlife habitat objectives, and to maintain or enhance fish habitat capability to at least retain existing capability.

Bull trout redd surveys were completed by the Washington Department of Wildlife on 18 index streams. These are the Bumping River, Rattlesnake Creek, South Fork Tieton and the North Fork Tieton Rivers, Clear Creek, Mad River, Chikamin Creek, Chiwawa River, Buck Creek, Alpine Creek, Phelps Creek, Rock Creek, Panther Creek, Box Creek, Canyon Creek, Cold Creek, Indian Creek, and Deep Creek. This information is reported in the Bull Trout Species Management Guide completed March, 1991, in cooperation with the Washington Department of Wildlife.



Riparian protection zones were monitored as part of the Forest-Wide Standards and Guidelines. Standards and guidelines appeared to be included in the activities designed within these zones. However, none of the activities had been implemented so effectiveness could not be monitored. Some of the activities monitored this year for implementation will be monitored in the next few years to further test the effectiveness of the standards and guidelines.

K. RANGE MANAGEMENT AND RELATED ACTIVITIES

The vegetative types within the Forest environment have evolved through the natural interactions of grazing animals and wildfire occurrence. Fire removed or thinned trees while large grazing animals used and modified the resulting forage resource. This interaction has provided wide diversity of vegetation and wildlife. Grazing of vegetation by large wildlife species such as elk modified the forage. It also retained some vegetative types in successional stages beneficial for use by deer, mountain sheep, and many small game and non-game species. The management of range-lands on the Wenatchee National Forest involves the use of livestock as a tool to manage the vegetation. When the management of range vegetation is approached in this manner, there is a substantial opportunity to use livestock grazing to enhance other resource objectives. Approximately ten percent of the National Forest lands on the Wenatchee are now used for livestock grazing which includes both cattle, sheep, and horses, and inventoried recreation livestock allotments. The Forest Plan does not propose an increase in the land area allocated to livestock use.

Some of the intensive range management practices used this past year included the application of fertilizer on 55 acres on a Chelan Ranger District allotment. The forage on the fertilized area has more nutrients than the native non fertilized areas and attracts livestock and big game animals away from natural concentration areas such as riparian zones. This practice will help reduce over use in these zones. An innovative approach to help deal

with noxious weed infestation on the Entiat District was the importation of a root boring beetle from Canada to help control the spread of diffuse knapweed. The insects were released last year for the first time, and the area will be monitored this year to determine the effectiveness of control. There were 210 acres of nonstructural improvements made on range-lands. Of these 100 acres involved hand pulling of Common Crupina (a noxious weed) on the Chelan Ranger District. It was originally thought that the 100 acres represented the only infestation on the Forest, but more intensive surveys have shown that the noxious weed is found in other locations including the Wilderness areas on the District.

Less intensive practices undertaken included more active use of sheep grazing to control competing vegetation on specific sites needing to be reforested after recent timber harvest and in young plantations.

Goals for range management include: (1) managing the range resource to maintain and improve vegetative conditions while making full utilization of forage allocated to livestock; (2) providing opportunities to enhance other resource values through the use of livestock to shape desired plant communities; (3) improving forage condition with an upward trend in ground cover and species composition, contributing to the protection and enhancement of soils, watershed, and wildlife forage; and (4) maintaining all structural improvements at, or as near as possible to, the standard to which they were constructed.

Permitted livestock use during 1990 totaled 22,171 animal unit months. Predicted animal unit months for the first decade were 23,000 annually. The actual permitted use amounts to 4% less than the predicted and is within the threshold of variability identified in the monitoring plan.

Forage utilization in key riparian areas and upland areas was checked in the Union Valley allotment. Utilization standards were exceeded in some areas and the Chelan District Ranger has initiated action with the permittees to correct this situation. On the MacFarland allotment, utilization appears to be within the standards for both upland and riparian areas. Key riparian areas were identified on both allotments and will be more intensively sampled in 1991.

L. ROAD MANAGEMENT

Early in the 20th century, railroad logging began on the Wenatchee National Forest. The railroad replaced animal and water transport of logs in the Teanaway, the Swauk, and the Wenatchee drainages. Log trucks began to compete with railroads in the 1920s and by 1944 railroad logging had ended. Since the 1940's the majority of Forest road construction has been in support of timber management activities. Through the 1950s and 1960s the primary road systems were improved and extended in response to the demands of an increasingly mobile public. The National Forest Management Act of 1976, states that: "roads constructed on National Forest System Lands

shall be designed to standards appropriate for their intended uses, considering safety, cost of transportation, and impacts on land and resources."

The Forest goal for road management is to plan, design, operate, and maintain a safe, economical transportation system which provides efficient access for the movement of people and materials involved in the use and protection of National Forest lands.



Interdisciplinary field reviews of projects were conducted as part of the monitoring of the Forest-wide standards and guidelines. There were a variety of projects reviewed including two recreation areas, one special use area, two thinning areas, and five timber sale areas. The special use area and thinning projects were completed before the Forest Plan was implemented. However, the road access for the special use area did meet Forest Plan Standards. No roads were constructed as part of the thinning projects visited.

Ground disturbing activities had not yet begun on the remaining projects monitored. One timber sale included a local road location that appeared to have the potential to impact a dry drainage. An engineer, a geologist, and a soil specialist visited the location for a closer examination. This review resulted in a recommendation that the rocky material to be excavated in the road construction be used to stabilize the flood channel below the road and prevent high water from undercutting the slope and causing a slide.

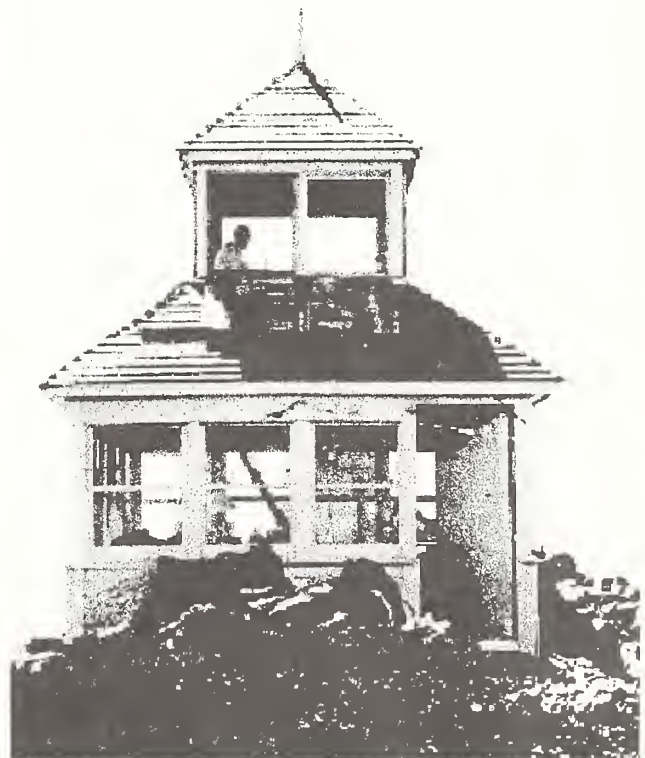
There were 8.3 miles of arterial and collector road construction and reconstruction this past year compared to a Congressional appropriation Act target of 12.5 miles. The Rainy Creek/Lab paving was deleted from the fiscal year schedule because it was located in a spotted owl Habitat Conservation Area, and the Icicle/Lake recreation project was not awarded.

There were 141.4 miles of timber purchaser road constructed compared to a target of 81 miles. The extra attainment in timber purchaser road construction was caused by: (1) the award of timber sales sold but enjoined in FY 1989, and (2) the expanded effort to meet the timber targets from Section 318 of the Federal Budget Act.

The miles of construction exceed the 25% variability allowed in annual projections, but when the factors which resulted in the changes are considered the variability appears reasonable. Detailed reports are due after five years of monitoring.

M. FOREST FIRE PROTECTION AND USE OF PRESCRIBED FIRE

Fire is an event that has played an important role in the many ecosystems found on the Wenatchee National Forest. It is an event that varies in frequency, extent, and intensity and is dependent on the climatic, topographic, and vegetative conditions occurring at the point and time of ignition. The northeast portion of the Forest at mid and low elevations have a high fire frequency and frequent large fires. The southeast part of the Forest, south of Mission Ridge and along the eastern boundary of the Forest in Kittitas and Yakima counties, also have high fire frequency but a moderate frequency of large fires. The remainder of the Forest, which lays closer to the Cascade Crest, has a moderate fire occurrence frequency and a low to moderate large fire frequency. There are well over 100 lightning and human-caused fires occurring each year on the Forest.



Forest managers continue to adjust their approach to managing fire to respond to fire management research, changing national direction, and land development on neighboring private lands. Forest managers conduct an active prescribed fire program. This ranges from the use of fire to replicate the natural fire cycle within the Alpine Lakes Wilderness, to the disposal of logging residues in preparation for reforestation activities. Prescribed fire has also been used to enhance mule deer winter range and to decrease the buildup of natural fuel to reduce the risk of a wildfire.

The 1990 fire season started out rather slowly with only a handful of fires being reported through the first 10 days of July. The picture changed abruptly on the afternoon of July 11 when more than 50 fires were started by lightning. This was the start of what was to become one of the busiest fire seasons in recent memory. During the next 7 weeks the Forest Interagency fire crews suppressed over 200 fires with the vast majority having been started by lightning. Forest managers on two occasions requested the assistance of Wilderness Fire Assessment Teams. The primary job of the teams was to provide the Forest Supervisor with observations and recommendations on alternative suppression strategies, safety, unusual fire behavior, and compliance with Forest Service fire policy and Forest Plan Standards and Guidelines.

At one time 14 helicopters and 7 airtankers were committed either to initial attack on wildfires or for firefighter support. With the large number of fires burning in wilderness areas, air tankers dropped a substance called "fugitive" retardant for the first time on the Forest on an experimental basis. This is a liquid

retardant with a color which fades quickly, almost like "disappearing" ink used by children. Standard aerial retardant has a red coloring agent which is quite visible when applied to help air tanker pilots see where subsequent drops are needed. There was a concern that traditional retardant would have a long lasting visual impact in wilderness, especially in areas with rock outcroppings and weathered snags. Out of a total of 600,000 gallons dropped, 196,000 gallons was fugitive. There is a concern expressed by pilots that fugitive retardant fades too quickly, so further testing is likely to be needed.

Last fire season crews and overhead personnel were mobilized from neighboring National Forests and Forest Service Regions and from other federal and state agencies and county fire protection districts. During the same time period several large brush and timber fires occurred in the lower elevations either on or adjacent to National Forest lands. Firefighters attacking these blazes were organized under a Unified Command including local fire protection districts, the Washington State Department of Natural Resources and the Chelan County Department of Emergency Management.

The goals of fire management are to protect forest users, improvements, and forest resources from wildfire in a provisional and efficient manner. The program also seeks appropriate, efficient application of prescribed fire in support of the Forest Management program.

All Ranger Districts initiated Industrial Fire Precaution Levels which were established daily and reviewed by Aviation and Fire management in the Supervisor's Office. Information contacts, restriction closures and signing were all accomplished in a timely manner on all units. All District Rangers monitored, on site, at least ten percent of the fire suppression actions taken on their unit. The Fire staff officer visited the Entiat, Chelan, Naches and Cle Elum Districts to monitor fire preparedness prior to the onset of the prime fire season. In addition the Fire staff officer monitored fire suppression expenditures and resource loss to determine how well Forest Plan standards are being followed in suppressing small fires. For larger fires this was accomplished through a review of the fire status report (209's) submitted by Incident Command teams. The significance of findings will be discussed in a 5 year report.



As part of the monitoring of standards and guidelines the Fire staff officer reviewed Environmental Assessments for 10 percent of Forest activities which involve use of prescribed fire. All District Rangers were on site to observe at least five percent of the prescribed fire. On site followup reviews for prescribed fire projects will be done in the spring of 1991 for 1990 projects, which is the best time to review the results of prescribed burns.

N. AIR RESOURCE MANAGEMENT

The impacts of our human activities on air quality have not been well measured or documented on the Wenatchee National Forest. The effects of smoke from wildfires or prescribed fires on visibility have been documented. However, data concerning the chemical composition of the atmosphere over the Forest is essentially nonexistent. Wenatchee Forest managers administer three federally designated Class I airsheds in conjunction with the Glacier Peak, Alpine Lakes, and Goat Rocks Wildernesses. The Clean Air Act mandates that federal land managers protect the air quality related values in these areas. Forest managers are also concerned about the effects of fire, primarily prescribed fire, on community airsheds near the Forest.

During the 1990 season the Forest Service used prescribed fire to reduce activity and natural fuels on 7900 acres. In 1990 the majority of the acres were burned in the spring. This is a continuation of a trend that has been developing over the past few years and is especially true for broadcast and underburn units. The change from fall to spring burning coupled with increased requirements for removal of woody debris has substantially reduced smoke emissions from prescribed fire.

When the Fire staff officer reviewed Environmental Assessments for 10 percent of Forest activities which involve use of prescribed fire, air quality was one element of that review. The NEPA review included direction for the Ranger Districts to address dust from roads

and other air related concerns in Environmental Assessments. It also requires a definition of Air Quality Related Values for class I airsheds.

The Entiat Ranger District used photography to document the behavior of smoke columns on the 300 acre Johnson Creek underburn. The Leavenworth Ranger District implemented a procedure for photo documentation of smoke plumes and conditions on ten percent of the prescribed fire projects on the district. The procedure is in the burn plans for selected units where photo opportunities exist and where the risk of impacting air quality is high.

For all prescribed burns the Ranger Districts reported on their compliance with air regulations and restrictions daily during the period they were burning. This information was reviewed by the Aviation and Fire management division in the Supervisors Office.

There is an ongoing program to review the implementation status of the Air Quality Related Values Monitoring Plan for the Alpine Lakes Wilderness. The Lake Wenatchee Ranger District reported that all prescribed fires with potential to affect Class I or II airsheds were monitored and detailed information recorded by observers. They also used observers when using prescribed fire near sensitive wildlife species habitat to monitor effect on those animals. The results provided the beginnings of a solid data base with which to measure future activities. Detailed evaluation and reporting for all elements of prescribed fire monitoring will be available after the fifth year of monitoring.

O. COMMUNITY EFFECTS, RESOURCE BUDGETS, COSTS, AND VALUES

1. Social/Economics

Communities within and adjacent to the Forest are concerned that there be a balance between natural resource management and amenity uses of the Forest. Many of the residents of the communities in the area of the Forest derive their livelihood from forest-related activities and many more participate in a wide variety of forest recreation activities.

Economic activities in Chelan, Kittitas, and Yakima counties are tied to the activities of the Wenatchee National Forest. A large proportion of the residents of this area rely on the commodity and amenity resources of the Forest. Economic activities affecting local individuals include logging, sawmill operations, commercial livestock operation, tourism, and various recreational pursuits. Residents of the area have the opportunity to participate in nearby Forest recreation activities such as camping, hunting, fishing, hiking, and a range of winter sports. These opportunities generate demand for recreation-related goods and services.

This past year was the first year for implementation of the Forest Plan. Employment and Income figures are not yet available. Timber harvest figures for all ownerships are only available in preliminary form. Though there have been many potential effects on the Forest Plan, such as the impacts of new management requirements for the spotted owl, there have as yet been no changes in planned outputs.

Social and Economic goals of the Forest Plan are to: (1) provide local communities with a constant supply of the use of goods and services that provide for desired community growth; (2) provide funding levels necessary to achieve Forest Plan outputs; and (3) implement the Forest Plan in a cost efficient manner.

Results of monitoring this year include:

a. Change in payments to Counties:

Payments to counties were \$5,308,471.23. This is slightly below the previous four year average of \$5,522,596.00. The Forest Plan predicted payments to counties of 3.3 million in 1982 dollars (equals 4.3 million dollars in 1990). Payments to counties are above those predicted. In 1990 the Gifford Pinchot National Forest paid Yakima County \$347,299.06 based on the acres of that National Forest located in the county.

b. Change in local populations:

There is no data on local population changes, however, these can be easily inferred from employment data. From 1986 to 1989 local employment increased by 16.52 percent. Data from 1990 will be available in the fall of 1991.

c. Change in local employment patterns:

The employment security reports for employment and wage trends are published on a one-year delay. The number for 1990 will be available in the fall on 1991. The comparisons between 1986 and 1989 will help establish a baseline for helping evaluate impacts of the Forest Plan and employment and wages.

The Wenatchee National Forest impact area includes Yakima, Kittitas, Chelan, and Douglas County.

	1989 Covered Employment	86-89 % Change (1990 Base)	Average 1989 Wages in real dollars	86-89 % Change
Wenatchee Impact Area (Total)	117,097	+16.52%	\$16,103	-2.4%
Manufacturing Lumber & Wood Products	1,915	+2.96%	\$23,374	-13.92%
Paper & Allied Products	638	+21.52%	\$31,779	+2.61%
Retail Trade Eating & Drinking Places	7,156	+11.69%	\$6,431	+2.15%
Services Hotels & other lodging Places	1,962	+26.91%	\$7,708	+2.18%
Amusement & Recreation Services	1,610	+55.56%	\$8,127	-6.51%

The above sectors of the economy are directly affected by Forest Service activities.

Individual County Trends for the following sectors show the following changes:

TOTAL EMPLOYMENT AND WAGES BY COUNTY

	1989 Covered Employment	86-89 % Change (1990 Base)	Average 1989 Wages in real dollars	86-89 % Change
Chelan County	26,446	+14.74%	\$17,367	-2.06%
Douglas County	6,875	+30.55%	\$14,038	-9.60%
Kittitas County	8,579	+9.15%	\$16,749	-1.59%
Yakima County	75,407	+17.24%	\$15,762	-2.08%

MANUFACTURING LUMBER AND WOOD PRODUCTS

	1989 Covered Employment	86-89 % Change (1990 Base)	Average 1989 Wages in real dollars	86-89 % Change
Chelan County	400	-9.00%	\$20,053	-13.65%
Douglas County	n/a	n/a	n/a	n/a
Kittitas County	192	+3.23	\$23,650	-15.48%
Yakima County	1,359	+6.67%	\$24,225	-15.48%

MANUFACTURING - PAPER AND ALLIED PRODUCTS

	1989 Covered Employment	86-89 % Change (1990 Base)	Average 1989 Wages in real dollars	86-89 % Change
Chelan County	n/a	n/a	n/a	n/a
Douglas County	n/a	n/a	n/a	n/a
Kittitas County	n/a	n/a	n/a	n/a
Yakima County	638	+21.52	\$31,779	+2.61%

RETAIL TRADE - EATING AND DRINKING PLACES

	1989 Covered Employment	86-89 % Change (1990 Base)	Average 1989 Wages in real dollars	86-89 % Change
Chelan County	1,744	+12.59	\$6,477	+4.44%
Douglas County	440	+10.55	\$5,671	-27.33%
Kittitas County	981	+2.08	\$6,741	+15.06%
Yakima County	3,991	+14.06	\$6,419	+2.11%

SERVICES - HOTELS AND OTHER LODGING PLACES

	1989 Covered Employment	86-89 % Change (1990 Base)	Average 1989 Wages in real dollars	86-89 % Change
Chelan County	831	+24.4%	\$7,986	+1.04%
Douglas County	n/a	n/a	n/a	n/a
Kittitas County	213	+12.70%	\$6,128	-8.12%
Yakima County	918	+33.24%	\$7,823	+5.22%

SERVICES - AMUSEMENT AND RECREATION SERVICES

	1989 Covered Employment	86-89 % Change (1990 Base)	Average 1989 Wages in real dollars	86-89 % Change
Chelan County	368	+6.05%	\$9,886	+3.23%
Douglas County	89	+102.27%	\$9,766	-10.35%
Kittitas County	445	+144.51%	\$6,440	-8.03%
Yakima County	708	+53.25%	\$8,067	-4.93%

These numbers need to be carefully interpreted. They represent total employees and their wages. Retail trade and service industries utilize many part-time workers, thereby bringing down average wage scales. In good economic times these workers tend to work more hours thereby increasing their average wage. In times of recession they tend to work less hours. The time period from 1986-1989 was generally one of good economic expansion.

The significant drop in wages in the lumber and wood products industry was part of a national trend.

The following table shows trends in employment and income by major economic sectors between 1986 and 1989. This data helps establish the trend line for monitoring the effects of the Forest Plan.

	1989 Total Employment	86-89 % Change	Average 1989 Wages	86-89 % Change in Real Income
Impact Area (Yakima, Kittitas, Chelan & Douglas Counties)	117,097	+16.52	\$16,103	-2.49
Agriculture, Forestry, and Fish	22,787	+38.52	\$9,612	+8.42
Mining	280	+0.36	\$35,126	+7.58
Construction	3,893	+24.98	\$20,734	+1.77
Manufacturing	12,573	+6.82	\$22,466	-6.17
Transportation	4,348	+16.72	\$21,680	-8.21
Wholesale Trade	9,547	+20.33	\$17,189	-3.46
Retail Trade	20,124	+12.32	\$10,869	-3.27
Finance, Insurance	3,246	+1.34	\$19,056	+3.86
Services	20,860	+13.50	\$14,550	+1.99
Government	19,439	+9.70	\$23,208	+0.82

d. Changes in lifestyles, attitudes, beliefs or values:

There appears to be shifts towards an urban value system as more urban residents move into eastern Washington. Western Kittitas County is developing into a "bedroom" community serving the Puget Sound area.

e. Changes in Forest contribution to Forest products industry.

The following table shows Forest Service harvest volume and the percentage of total harvest within Chelan, Kittitas, and Yakima County.

	Thousand Board Feet	% Forest Service of Total Harvest
1986	220,856	40.25%
1987	198,371	36.40%
1988	159,279	34.49%
1989 (preliminary)	183,670	35.72%
1990 (preliminary)	148,595	43.66%

2. Costs And Values

Costs and values associated with Plan implementation are to be monitored by assessing the ability of Forest managers to provide funding levels necessary to achieve outputs in Forest Plan, and implement the Plan in a cost efficient manner.

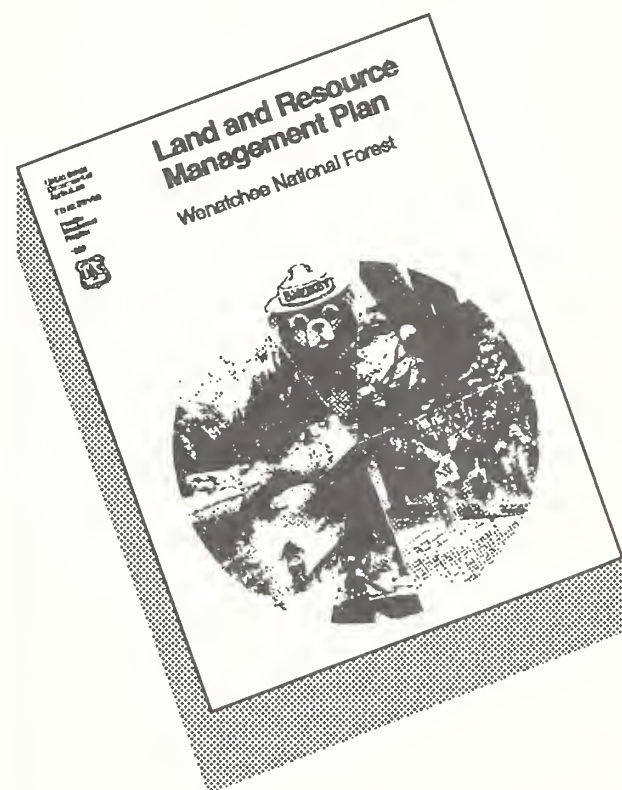
The first monitoring question is whether major costs used in the Forest Plan analysis are consistent with actual implementation costs. The Year End Report for Program Managers

will be used to compare actual and predicted costs after the first full year of implementation, and should be available by late spring of 1991.

The second monitoring question is whether values for forest resources are consistent with those used in Forest Plan analysis. These values will be developed in conjunction with the Year End Report for Program Managers.

3. Resource Budgets

The purpose of this monitoring is to track funding levels necessary to achieve outputs in the Forest Plan. The monitoring question is to verify whether budgets received are adequate for achieving the objectives described and projected in the Forest Plan. The Year End Report will be used to compare the actual and predicted budgets and outputs.



P. GENERAL MONITORING OF STANDARDS AND GUIDELINES

It is expected that all standards and guidelines and management area prescriptions contained in the Forest Plan will be followed for on-the-ground projects and activities. To ensure that standards and guidelines have been implemented as intended, a variety of site-specific projects were reviewed during the summer of 1990. An interdisciplinary team, consisting of the Forest Supervisor, Deputy Forest Supervisor, Forest staff Officers, and others with specific expertise, conducted the following reviews:

Ranger District	Projects Reviewed
Chelan	Lafferty Timber Sale (design stage)
Cle Elum	Upper Granite Timber Sale (design stage) Ski View Timber Sale (Implementation) Meadow Crest Timber Sale (Implementation)
Entiat	Precommercial Thinning Projects: Tyee Ridge, Murdock Gulch, and Preston Creek (Implementation)
Lake Wenatchee	Nason Creek Fish Pond (design stage) Chiwawa River Spring Chinook Rearing Facility (Implementation) Maverick Timber Sale (design stage)
Leavenworth	Diamond Timber Sale (design stage)
Naches	White Pass Ski Area (design stage)

These reviews revealed that the Ranger Districts are doing a good job of implementing the Forest Plan standards and guidelines in project design. In some cases they are exceeding the standards where site specific needs and issues warrant. Most environmental documents which have been written recently are of high quality. However, there are a number of areas where improvements would help monitoring efforts. There needs to be more discussion in the environmental documents of both standards and guidelines and management area prescriptions. In addition, more detailed documentation of analysis conducted as part of the project planning process is necessary.

Specific areas requiring more attention include the following:

- a. development of subbasin riparian management objectives;
- b. noxious weed evaluations;
- c. use of landscape architect skills on projects within recommended wild and scenic river corridors;
- d. and, the ability to achieve predicted Forest Plan outputs when site specific issues require Plan standards to be exceeded or planned schedules to be delayed.

In addition to the preceding points, there were action items identified as a result of the monitoring trips. These action items are summarized as follows:

Wild and Scenic Rivers

Follow-up and determine the Forest Service responsibilities for influencing activities on private lands adjacent to rivers recommended for classification under the National Wild and Scenic Rivers Act. Research the requirements of the Wild and Scenic Rivers Act and notify the Regional Fisheries Staff that some fish trapping facilities may be inconsistent with River Classification Proposals.

Wildlife

Develop a forest position statement on expanding the cavity excavator standards to exceed requirements on National Forest Land in order to make up for past cutting on adjacent private land. The present standard was not intended to make up for neighbors, and yield tables used to calculate Annual Sale Quantity do not reflect the yield loss on Forest Lands. Also develop a process to track lands shown as suitable for timber production in the Forest Plan which have been found unsuitable because of standards and guidelines of a management area prescription.

Send the white paper written by the Forest Wildlife biologist on snag levels out to the Districts. Some field people are not sure what 20% of the snag habitat levels represents. Analyze the Habitat Conservation Area information and the 50-11-40 rule to determine the effects of the White Pass expansion on Owl

Habitat. Compare the results to determine if the consequences are different than those resulting from the Spotted Owl Habitat Area. From this analysis the Forest will decide if a change in the White Pass Record Of Decision is warranted.

Recreation

Changes in the Recreation Opportunity Spectrum (ROS), if any, should be disclosed in Environmental Assessments. A ROS map will be made for the Forest, and direction developed for the way ROS will be handled in Environmental Assessments. Review the Partial Retention Visual Quality Objective (VQO) allocation and determine if direction is needed for which trails are to have partial retention VQO.



Air

Address dust from roads and other air related consequences in Environmental Assessments. Also define Air Quality Related Values for Class I Airsheds. Send the document written on "Total Suspended Particulate Emission Reductions" to the Districts as an example for calculating reductions. Determine the need for further assistance from the Forest fuels/air resource management specialist and possible training needs.



Vegetation management

Develop a meadow management Forest-Wide standard and guideline as a proposed amendment to the Plan. When pesticide use is being considered we will involve all interested members of the public and notify them that the use of pesticides is anticipated. Interested publics also will be given the opportunity to review the draft analysis of pesticide use before a decision is published.

Activities in progress when the Forest Plan was implemented need to be brought into compliance with the Forest Plan. On long range activities such as the forest thinning projects the Districts need to analyze each site-specific area and consider the standards and guidelines for each allocation where the activity is occurring. Special design may be needed to meet Visual Quality Objectives or other standards. Compliance with the Forest Plan standards and guidelines will be documented and retained in the analysis file.

III. FOREST PLANNING UPDATE

PLAN APPEALS

The ninety day filing period for appeals to the Forest Plan ended May 31, 1990. Twenty appeals were received: John Swanson, Northwest Forest Resource Council, Chelan Conservation Community, Pyramid Mountain Hunters, Wenatchee Timber Purchasers, et. al., Alpine Lakes Protection Society, Northwest Motorcycle Association, Columbia River Inter-Tribal Fish Commission, Yakima Indian Nation, Back Country Horsemen of Washington, American Rivers, Inc./Northwest Rivers Council, Eastern Washington Dirt Riders, Save Chelan Alliance, Upper Merry Canyon Community Association, Washington Cattlemen's Association, Blue Ribbon Coalition, Sierra Club, et. al., Central Washington Conservation Coalition, et. al., Lyle Purdey and Simon Martinez.

The appeals covered a wide array of issues including: community stability, recreation, trails, roadless area management, wild and scenic rivers, treaty rights, scenery, Wilderness

management, wildlife, fisheries, harvest level, harvest methods, old growth, cumulative effects, soil, water, riparian, range, socio-economic and planning process.

So far, one appeal (John Swanson) has been dismissed and administrative decisions rendered on eight others: Simon Martinez, Pyramid Mountain Hunters, Northwest Motorcycle Association, Back Country Horsemen of Washington, Eastern Washington Dirt Riders, Blue Ribbon Coalition, Lyle Purdey, and Upper Merry Canyon Community Association. The Regional Forester's decision was affirmed in all cases.

PLAN IMPLEMENTATION

Implementation of the Forest Plan was aided by the completion of the Forest Plan Implementation Strategy in December 1989. This document outlined the relationships between the Forest Plan and other Forest Service program activities.

The implementation strategy includes a process called Integrated Resource Analysis (IRA). Integrated Resource Analysis looks at resource options, cumulative effects, and various activities that could logically occur in an analysis area over a period of time. The Integrated Resource Analysis process was started last fall on the Naches Ranger District, and since then four other districts have been involved in the process. The key objective of each Integrated Resource Analysis is to identify a pool of projects necessary to achieve the outputs contained in the Forest Plan. The Entiat Ranger District recently hosted a public meeting to review their Upper Entiat IRA area, and asked the public for suggestions on projects to be considered for implementation.

Wenatchee Forest employees have made Plan implementation activities a top priority. You as interested publics or partners can become further involved through suggesting projects which you would like to see undertaken on the Forest (see the response form at the end of this document). These projects may be trail construction, wildlife improvement, vegetative management, recreation development, or other activity which achieves the objectives of the Forest Plan.

PLAN AMENDMENTS

Based on an analysis of the objectives, standards, and other contents of the Forest Plan, the Forest Supervisor may make Plan amendments. No amendments to the Forest Plan have yet been made except for the Secretary of Agriculture's amendment concerning Spotted Owls. However, several amendments are pending or anticipated.

Amendments which are pending in 1991 include:

- Corrections of numerous editing errors which were discovered after The Plan was released to the public.
- Amendment of the Timber activity schedule for fiscal year 1991.
- Change in the wording of a Wilderness Standard and Guideline in response to a Forest Plan appeal from the Backcountry Horsemen.
- An additional Forest-Wide Standard and Guideline dealing with conifer invasion into natural meadows.

In addition to the above, an amendment of the entire activity schedule which will cover a three to five year period is planned for October.

If you have any comments or wish further information on the proposed amendments please send them to: Forest Supervisor, 301 Yakima St., P.O. Box 811, Wenatchee, WA. 98807-0811.

CLOSING COMMENT

A response form is provided on the last page of this document for your use in commenting on amendments and the monitoring report, or suggesting projects for Forest Plan implementation.

In addition, please indicate the type of Forest Plan information you would like to continue to receive.

WENATCHEE NATIONAL FOREST FOREST PLAN MONITORING REPORT

RESPONSE FORM

An important facet of implementation of the Wenatchee National Forest Land and Resource Management Plan is the monitoring that takes place to determine whether specific programs and projects are meeting Forest Plan direction. The Monitoring Report provides the results of our monitoring efforts for the first six months of the Plan, from April to September, 1990.

After your review of the Report, please take a moment to give us your thoughts. This postage-paid response form may be used to share any general comments or concerns you may have about the Monitoring Report, propose additional projects, and comment on the anticipated amendments to the Forest Plan as outlined in the Report. When completed, this form can be folded in thirds, stapled or taped closed, and dropped in the mail. Please feel free to send a personal letter if you prefer.

We would appreciate receiving your comments by July 15, 1991.

The following are my thoughts on the Monitoring Report:

My thoughts on possible Plan Amendments (page 42):

FOLD

HERE

My suggestions for projects that would help implement the Plan (pages 41, 42):

FOLD

HERE

☐ **Please send me the information on all Forest Plan Amendments and Supplements.
(Check this box and write your name and address below)**

We need to inform you that the Freedom of Information Act (FOIA) and the Privacy Act govern the creation, maintenance, and disclosure of Federal Governmental mailing lists. Under provisions of the FOIA, the names and addresses of persons on these lists will be released upon request, unless the request falls within one of the FOIA Exemptions.

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